



#### LORD RUNNER



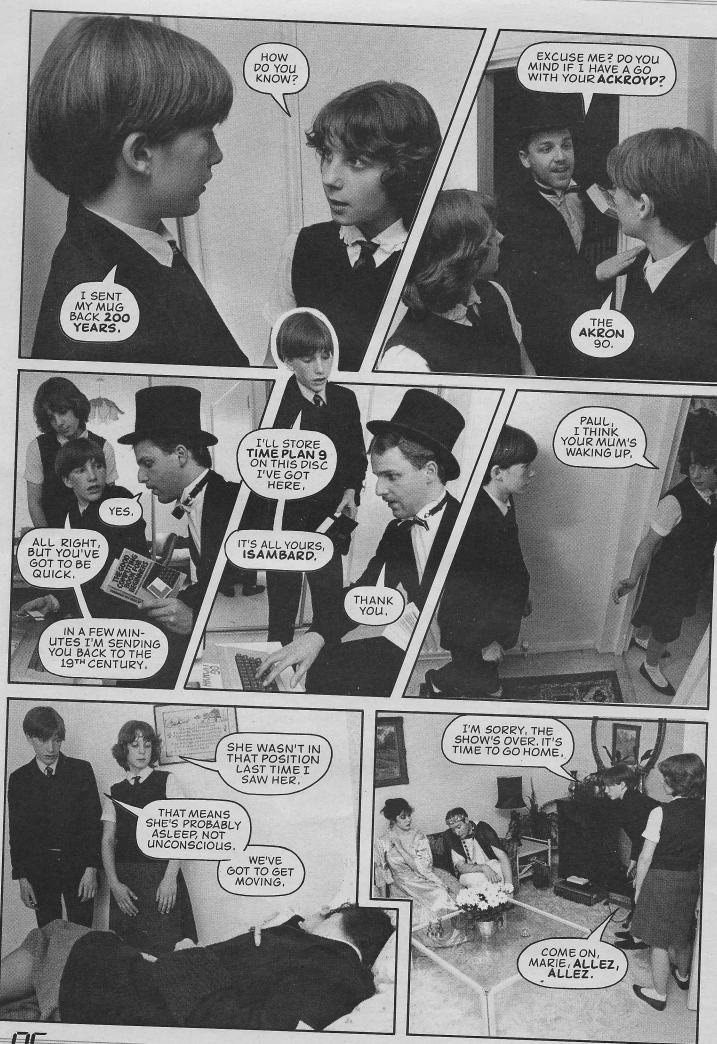




#### LOAD RUNNER













HIE PLANS



### MICROGAMES

Patrick Bossert (Author of You Can Do The Cube) Philippa Dickinson

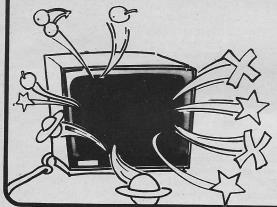
An electrifying selection of easily programmable, original games for BBC (models A and B), RML (380Z and 480Z) ZX Spectrum, and ZX 81. £1.50 (illustrated)

Starting 1 September

A micro competition with macro prizes

#### PUFFIN YOUNG PROGRAMMERS OF THE YEAR

in conjunction with Sinclair Research and the National Association of Youth Clubs



- \* Three age ranges
- \* 9 Sinclair ZX Spectrum or equivalent software to be won
- \* 50 runner-up prizes of Penguin micro computer books in each section

### Build up on your BASIC now... the search is on!



Entry forms: Children's Marketing Dept., (Sincomp), Penguin Books Ltd, 536 King's Road, London SW10 0UH





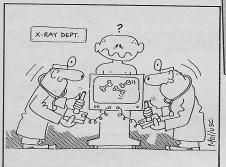
In Printout No 9 Load Runner will be giving away an exciting FREE GIFT — an exclusive single recorded by the rock band MAINFRAME plus a program to accompany the music for the BBC, Spectrum and Dragon computers. To find out more about MAINFRAME watch the Show-me Show on BBC 1, September 14th. And place an order now with your newsagent for printout no 9, on sale October 13.

Cruel but fair CONGRATULATIONS on a superb comic. It is very original and worth every penny. It's even better now with the computer programs. Keep up the good work.

Why are computer programmers cruel? Because they POKE and PEEK at the

Marvin Dennis, 12, Leyton, E10 computer.

 I referred your joke to my programmers who were not amused. They then returned to their gruesome task of PUNCHING IN commands and watching their EXECUTION. Not a pretty sight.



#### Time Plan Zero?

I THINK your very original computer comic is excellent and good value for money. The artwork is very good and so are the plots of the picture strips.

In my opinion, however, Time Plan 9 is a lot of rubbish. I enjoy Countdown to Chaos and am glad you have started reviewing games in Soft Spot.

So, apart from the photo-story your comic is brilliant. Keep up the good work.

John Hobbs, 13, Exeter

LOAD RUNNER is very well done. I like all the stories, but the stories I like best are Load Runner, because of the excitement; Time Plan 9, because of the mystery and suspense; The Invasion of the Arcadians because of the artwork.

Douglas Cormie, Glasgow

These are just a few lines from the extensive input which has arrived at my installation base. All your data has been filed by my operators for future reference. Time Plan No. 9 terminates in this printout and a thrilling new story program is loaded and ready to run in printout 7.



 Above are the winners of my Bugsy Ma lone Competition pictured in the Sord Showrooms just before leaving for the theatre. From left to right they are lan McIntosh, Angela Meyers, Daniel Ludlam, John Stevens and Darron Ferguson.

#### AQUARIUS COMPETITION

Below are the winners of the Aquarius Competition in Printout No 3:-Christopher Filby, 14, Bedford Nicholas Allgood, 13, Chaddesden,

Derbyshire Martin Tortell, 14, Bromley, Kent Jarnal Singh Rana, 15, Handsworth,

Birmingham James Sullivan, 11, Bexley, Kent Tristan Walker, 13, London NW6

ATTENTION ALL DECODERS!

My operators have negotiated a special Load Runner discount for the Madame Tussaud's Royalty & Railways exhibition at Windsor & Eton Central Station, described in A.D. 1983 on page 37 of this printout. On presentation of a security pass together with the voucher below, the bearer will be entitled to a 50% reduction on the normal admission charges of £1 for children and £1.85 for those over 15. The voucher can be used for one admission only, but is valid until August 31st 1984. An amazing opportunity to view a unique display of computercontrolled animated figures.

The Load Runner Decoders grow in num-

ber every day, and my operators are gallantly struggling to deal with the ever increasing input. Those of you who haven't yet received your security passes and code books will be doing so shortly.

Listed below are the names of the lucky Decoders who will receive the free tickets for the Personal Computer World Show that I announced in Printout No. 4.

Tony Smithers, Woking Surrey Lee Andrews, Gravesend, Kent Marcos Soul, Oxford Peter Kempshall, Newhaven, E. Sussex loan Jones, Clwyd Ben Russell-Gough, London N9 Gary Perrin, Dagenham, Essex

Adam Jackson, Maidstone, Kent Tudor Costigan, Cheltenham, Glos D. Geoghegan, Mitcham, Surrey Incredible as it may seem to some, there are still some Load Runner readers who have yet to realise the overwhelming benefits of ioining the Decoders

For only £3 — or nothing at all, if you had the foresight to collect the tokens in the first 4 Printouts of Load Runner - you can gain access to the wealth of special offers and prizes that I will announce in each Printout. Just complete the coupon below and together with 2 passport-size photographs send it to me: Load Runner Decoders, 196-200 Balls Pond Road, London N1 4AQ.



List below the story/programs and fact routines that you like best in Load Runner.
11
12
3
What do you dislike most in Load Runner?
Do you have a computer? YES/NO
NameAge
Address

### QUICKSILVA QUIZ 50 CASSETTES TO BE WON



THE GAME LORDS at Quicksilva have agreed to donate 50 fabulous cassettes as prizes for this printout's thrilling competition. The cassettes cover a variety of different machines and there is something for almost everyone. Top of the list are Quicksilva's recently released smash hits for the 48K Spectrum—AQUAPLANE, VELNOR'S LAIR, XADOM, 3D STRATEGY and SMUGGLER'S COVE. The prizes can be chosen from the selection

AQUAPLANE: ski through the shark-infested waters (48K). XADON: search for the Artefact in a 3D maze world (48K) VELNOR'S LAIR: penetrate Velnor's labyrinth to prevent his metamorpho-

sis (48K).
3D STRATEGY: the virtually unbeatable superfast game (48K).
SMUGGLER'S COVE: find Black Beard's treasure, but beware of the pirates

ASTROBLASTER: survive the five attack waves of alien spacecraft (16K). FRENZY: zap the lumbering monsters and avoid the exploding pods (16K).

SKYHAWK: pilot the jet fighter and defend the village (3K or 8K + joystick). SUBSPACE STRIKE & ZOR: unlease havoc in the Federation Spacelanes

HARVESTER & BRAINSTORM: reap boosterspice in this cut-throat strategy game (unexpanded).
PIXEL POWER: create user-definable characters with this useful graphic

workshop (8K or 16K).
STARQUEST & ENCOUNTER: seek a habitable planet amidst the perils of the cosmos (16K).

Atari 400/800 MAGIC WINDOW: excellent character generator with full joystick control

**Dragon**MINED—OUT: save Bill the worm and rescue the cloned Damsels (48K).

WIZARD: fight off the demons with your magical powers (32K).
PROTECTOR: protect the Units against the mine-laying UFOs and the lethal monsters (16K + joystick).
BEEB-ART: creates amazing hi-res pictures with joystick or cursor keys

16K ZX-81

PIONEER TRAIL: a western adventure based on historical data. DAMPER & GLOOPER: adventures in power grids and mazes. COSMIC GUERILLA: battle with the rebel craft in outer space. COSMIC GUERILLA: Dattle With the reper craft in outer space.

OCEAN TRADER: all the perils of the high seas.

3D BLACK STAR: navigate the narrow corridor, dodging the pursuing craft.

MUNCHEES: beware the ghostly creatures in the haunted house.

CROAKA CRAWLA: a frog's battle for survival.

GALAXIANS & GLOOPS: attack the invading aliens.

To enter simply answer the questions below and complete the tie breaker. The competition will be judged by Quicksilva and the 50 winners will each receive the cassette of their choice.

Send your entries to: Quicksilva Quiz, Load Runner, ECC Publications, 196-200 Balls Pond Road, London N1 4AQ, to arrive not later than September 16. The judges' decision is final and employees of ECC Publications and Quicksilva are ineligible.



3) Quicksilva's first program for the Spectrum was:- a) Timegate. b) Space Intruders, c) Trader. d) Mined-Out  10) Quicksilva's Head Office is at:- a) Plymouth. b) Southampton. c) London. d) Liverpool.  4) The American version of the Spectrum will be called:- a) Timex Spectrum. b) TZX 100. c) Timex-Sinclair 2000. d) Timex ZX83  As a tie breaker, complete the following in not more than 12 words.  5) Name two computers other than the ZX81 and Spectrum for which Quicksilva also produces software.  6) What is the name of the show held 4 times per year which is dedicated entirely to Sinclair computers?  7) The Spectrum's microprocessor is called:- a) 6502. b) Z80. c) 6708. d) Z80A  Address  Address	1) 1) 2)	Name Sinclair's first home computer  Quicksliva was originally founded as: a) A business software house. b) A book publishing house. c) A manufacturer of ZX80 add-ons. d) An arcade machine manufacturer.	8) Quicksilva's slogan is:- a) The Game Lords. b) Superlative Software. c) Solid Silver. d) QS—The Best
a) Timex Spectrum. b) TZX 100. c) Timex-Sinclair 2000. d) Timex ZX83  As a tie breaker, complete the following in not more than 12 words.  5) Name two computers other than the ZX81 and Spectrum for which Quicksilva also produces software.  6) What is the name of the show held 4 times per year which is dedicated entirely to Sinclair computers?  7) The Spectrum's microprocessor is called:  a) 6502. b) Z80. c) 6708. d) Z80A  As a tie breaker, complete the following in not more than 12 words.  Quicksilva Software is the best in the Universe because.  Name  Name  Address	3)		10) Quicksilva's Head Office is at:-
5) Name two computers other than the ZX81 and Spectrum for which Quicksilva also produces software.  6) What is the name of the show held 4 times per year which is dedicated entirely to Sinclair computers?  7) The Spectrum's microprocessor is called: a) 6502. b) Z80. c) 6708. d) Z80A  Address	4)		
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7) The Spectrum's microprocessor is called: a) 6502. b) Z80. c) 6708. d) Z80A Address	6)		The cassette I would choose is
	   7) 		

I	D	E	A	L	A	G	A
E	N	V	E	D	Т		
C	A	S	L	R	I		A CONTRACTOR
S	R	P	В	R	E		
A	T	L	O	G	0	E	
M	C	S	A	P	A		X
X	A	R	0	U	Т	I	
A	L	P	В	Е	L	N	

Find the correct letter 'S' and follow the directions to make a word:

S, NW, W, N, N, SE, E, NE, SE, W, SE

. . . . . . . . .

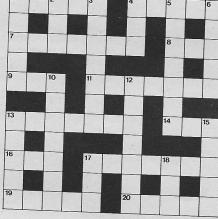
COMPLETE the following words or phrases. All except one is a computer term. Which is the odd man out.

BUS\_ \_ CHIPS BOOT HAND

FIND the next combination of binary digits by following the sequence

11011010 01101011 10101110

### Wordplotter 6



#### Across

1. Little logarithm with a chip-the basis of computer operation (5)

4. Swish new micro carried by old runner (5)

7. How future computers will communicate with us

8. Cry for help one way or the other (3)

- 9. Assignment statement in Apple, TI and Sinclair Basic (3)
- 11. Computer—exist! You're a little bug! (7)

13. LET C = A + B (4,3)

14. Last statement in the broken disc (3)

16. What micro users do? (3)

17. Don't be afraid, except of a logical keyword?

19. Clive Sinclair's is "Sir" (5)

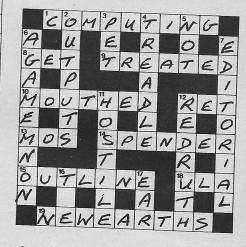
20. Find hobbits in the middle to connect equipment safely (5)

#### Down

1. Get it right with the cassette recorder (5)

- 2. Generally an electric company (3)
- 3. Vertical rows on the screen (7)
  4. People think the ZX-81 is one, but it isn't! (3)
- Get the DATA back about the shop (7)
- 6. More of it will slow you down (5)
- 10. Brown man with a trig. ratio (7)
- 12. What micros do—and what to do with micros (7)
- 13. A big bug? (5)
- 15. Go it and split the cost in the Netherlands (5)
- 17. What the Controller gives you for publishing your letter (3)
- 18. Not OR from when you load, run or list (3)

WORDPLOTTER 5 SOLUTION

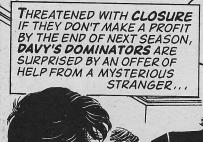


ANSWERS to the puzzles in last printout: The bank computer would perform task 3 at 5 pm.

The Secret Path spelt out the words GRAPH PLOTTER.

Meet Beverley Jeavons—Bev for short She's a trouble maker and arebel. Her teachers don't nink much of her and she thinks fact thing she thinks a computers. S Her story begins next printout-

# Andy Royd—the DONAL ASSOCIATIONS Rogue star!



WHO DID YOU SAY YOU WERE? AND WHAT HAVE YOU GOT AGAINST N.M.E?

MY NAME IS ISOBEL D'ARTH.









YOUR SOFTWARE IS HARDLY
STATE-OF-THE-ART, IS IT ?!
I COULD WRITE PROGRAMS FOR
YOUR ROBO PLAYERS THAT
WOULD RIP THROUGH THE
OPPOSITION'S DEFENCES!

...AND KEEP N.M.E. OUT OF THE DOMS'HAIR FOREVER!











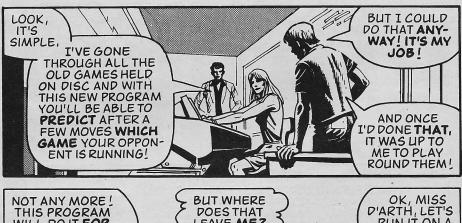
EARLY NEXT MORNING ...

THERE'S ONLY ONE WAY TO

FIND

OUT ...

SHE'S BEEN IN THERE ALL NIGHT! DO YOU THINK SHE'S OK?





ROBOPLAYERS HAVE TAKEN OVER ALL PROFESSIONAL SPORT BUT ANDY ROYD, USING HIS HI-TECH BIOMECHANICAL LIMBS HAS SECRETLY FOUND A WAY TO PLAY!

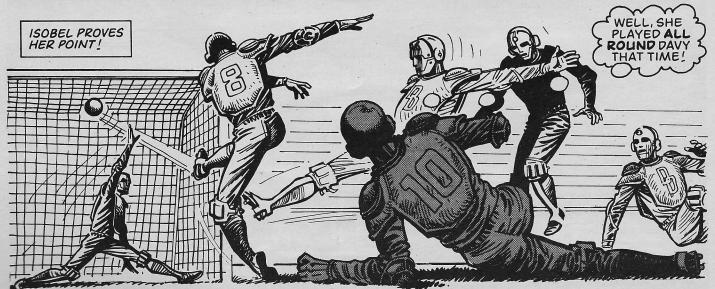
RIGHT, ANDY, JUST FOLLOW THE COMPUTER INSTRUCTIONS I GIVE YOU AND WE'LL SEE HOW GOOD

REALLY IS! ANYTHING YOU SAY, BOSS ...









### ANDY ROYD





# nside natio

The wonderful world of the PCW Show opens up again on 29th and 30th

September and 1st and 2nd October. And, like every previous Show, it's the one and only place for the newest, biggest, smallest, costliest, cheapest, finest, micro hardware, software, bolt-ons and books.

Where the big news breaks first. At the Personal Computer World Show

you'll see the launch of some astonishing new kit, fascinating

software and vital peripherals.

And you can discover it all at first hand, scooping all the magazines.

#### Know the world of personal computers.

Just about every micro manufacturer, software vendor, and goodie supplier will be at the PCW Show.

There'll be special deals on offer, too, as well as the chance to enter the Computer Scrabble R competition, and watch the 4th European Computer Chess championship.

Plus the MicroComputing Centre, Computer Town, Computer Clubs, and more.

The time and the place for everything.

Make sure you visit the PCW Show. It's on from Thursday September 29th until Sunday October 2nd, at the Barbican Exhibition Centre in London.

It'll be fully signposted, and is to reach by tube, bus or car. Make sure you don't miss out.

#### The PCW Show: £3.00-but to

you £2.50. Clip and keep this voucher to save 50p when you buy a PCW Show ticket on the day

#### PCW SHOW 50p **DISCOUNT VOUCHER**

This voucher entitles the bearer to 50p (fifty pence) discount on the full £3.00 entrance fee to the Personal Computer World Show.

The organisers reserve the right to admission. Only one voucher per person/entrance. LR10

Or to really save, organise ten or more friends and order our £1.25 Group Tickets in advance-nearly 60% discount!

Just complete and send the coupon today.

#### **PCW SHOW GROUP TICKET ORDER**

- I have managed to persuade, cajole or press gang \_\_\_\_\_ (10 or more!) of my friends to attend the PCW Show, so please send me the same number of tickets at the very special rate of £1.25 each inc.
- ☐ I enclose a cheque for made payable to **PCW Show**
- ☐ Charge my Access/ Barclaycard No .\_

Signed\_ Name

Address\_

**PCW Show Tickets**, 11 Manchester Square, London W1M 5AB.

Please note: This offer is only for 10 or more tickets per order. LR10 

### SOFTSPOT

#### Creepy crawlies

TRACKING the Centipede is just one of the tasks in the 16K Oric version of this traditional arcade

The deadly creature will be the least of your worries as the game progresses. In the second phase spiders start to jump around the screen. They may not seem life-like but they are lethal.

In the third and fourth phases of play the spiders are joined by bugs which plant extra mushrooms on the screen. If you manage to get through the fifth level a second centipede joins the first.

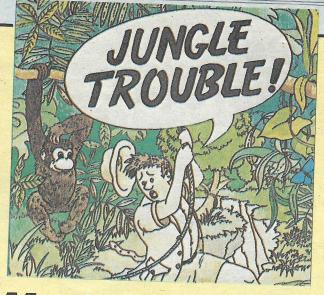
This version of Centipede bears a close resemblance to the original, though it is not so colourful. It is fast but the player's controls are difficult to use. You have to take your hands off the controls to start a new game and that may cause confusion if your reactions are slow.

The game would have been easier to play if the player had been given the choice of which keys to use. That would have a double advantage as both left and right players would be able to play the game with ease and the keyboard would not be destroyed by constant thumping on one particular key.

Centipede costs £6.95, and is available from PSS.

Fun, 7; addictive, 7; graphics, 6.





### Monkey business

YOU ARE ASSURED of a swinging time in Jungle Trouble, for the 16K Spectrum.

First, though, you have to hop across a crocodile-infested river, knock down some trees with your axe while harassed by monkeys and climb a ladder to get to the fire pit. At that point you display your Tarzan-like biceps, grab a swinging vine and leap over the

The game has four levels of play. The first task is the most difficult as you must cross the river using stepping stones, hitting the 'jump' key at the right time or you will fall into the river and probably be eaten by crocodiles. That part of the game is so difficult that the rest is almost an anti-climax.

Jungle Trouble costs £5.50, from Durrell Software. Fun, 6; Addictive, 6; graphics, 8

#### Ingenious alien invasion

OBLIVION is a fast-action arcade game from Bug-Byte which may strain your trigger finger. Running on a BBC Model B (or expanded Model A) it is similar to Galaxians, just as much fun, and allows you to play against the machine or a friend.

Using four controls to move and fire you must shoot down the descending aliens; but beware, if they get low enough they start to chase you, dropping bombs as they go. Just when you think you have mastered that another type of alien appears and that one isn't so easy to kill. As your score increases the attackers become increasingly clever with such ingenious weapons as bombs which follow you and enemy ships which hover above you, just out of

The game features on-screen display of score and highest score, and a demonstration mode and, as you would expect on the BBC, the sound and graphics are superb. Fun, 7; addictive, 7; graphics, 9.

### atrix, son of

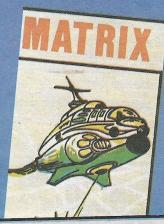
THE DROIDS are back in Matrix, the all action machine coded sequel to Gridrunner, from Llamasoft, It runs on the Commodore, 64 and, because of its speed, must be played with a joystick. There are 20 zones to fravel through, each with new combinations of aliens. Six of them can be selected at the beginning of the through the other 14 levels using a 'letter' key. You have to get that a good loystick.

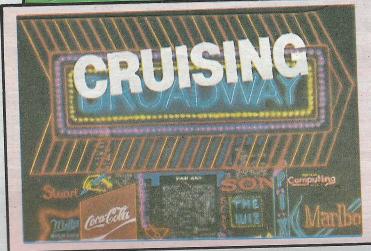
have a good joystick.

The instructions for the game are not perfect. The 'letter' keys prove to be 'function' keys at the side of the main keyboard. No took some time to find the key to operate it.

The game takes place on a grid where droids attack in squads. Mystery bonuses can be earned if you do well against them. Several attack waves consist of camels. You must hit as many you are not quick enough it could run down to zero. The instructions are so confusing.

In Matrix at £7.50 is a fast and entertaining game. It is a pity that fun, 7; addictive, 7; graphics, 9





#### **Confusing Cruising**

USUALLY software houses which produce maze chase games try to make them exciting, graphically impressive and original. Unfortunately Cruising, for the Dragon 32, is boring and there is nothing, except its speed, for which we can recommend it.

During the game the player is chased by a small object called a Chaser. To throw the creature off the scent you have to make a gap in the track on which you are travelling. If you complete one circuit you will have finished one level and a new maze pattern is put on to the screen. That continues through succeeding levels until either you are hit by the Chaser or bored with the game and

The higher you go the more complex the maze patterns become and the easier it is for the Chaser to catch you. If complex patterns and moving dots are what you want, however, it would be better to buy a pattern generator.

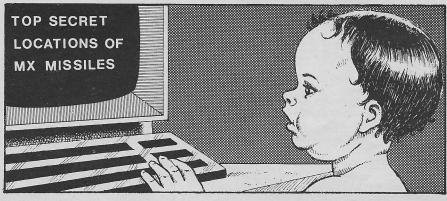
The cost of Cruising is £6.95 from Sunshine.

Fun, 6; addictive, 5; graphics, 4.

# Easy access to state secrets

IT SEEMS that the feature film War Games is not so far-fetched after all. Only weeks after the film was released in the States, ten youngsters living in Milwaukee succeeded in accessing into the National Computer at Los Alamos, New Mexico. The youngsters, all aged between 15 and 22, discovered the correct access number and by

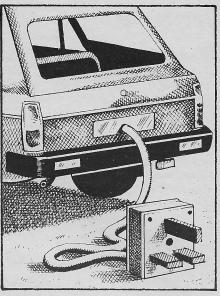
using a modem relayed information from the nuclear weapons laboratory to their personal computer. A spokeman for Los Alamos has said that the access number has now been altered, and that the information accessed was, in any case, unclassified — but then he would say that, wouldn't he?



#### Talking computers

TWO NEW PROJECTS have recently been announced for computers to help the disabled. The Versatile Portable Speech Prosthesis is an experimental wheelchair for those who can neither walk well nor talk intelligibly. It will hopefully enable the speech to be clarified and produced through a 'voice box' restel, for controlled by a computer and accessed.

powered from the wheelchair batteries. A computer system is being produced for the Open University which will 'speak' to the user, communicating information which would otherwise appear on a screen, so that the contents of Prestel, for example, can be readily accessed.

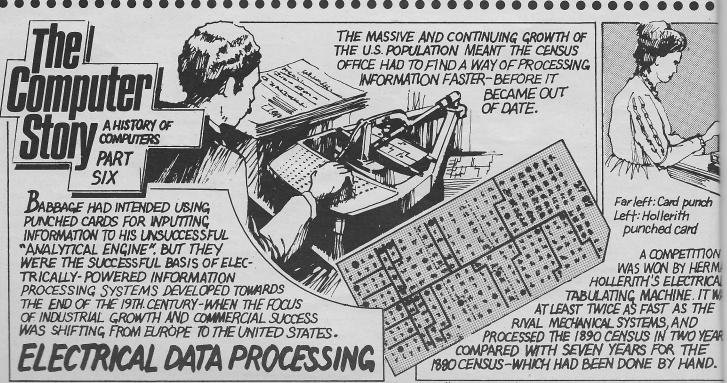


### Current affairs

CLIVE SINCLAIR'S latest project uses computer technology to challenge all of the basic concepts that have, until now, prevented electric transport from becoming a reality.

Sinclair has come up with a radically new, though very simple, method of prolonging battery life.

The main problem stems from the fact that batteries cannot withstand rapid and continuous discharge or recharging. Sinclair has solved that by using a microcomputer to switch the current on and off at intervals of 3 microseconds. This has the effect of prolonging battery life while presenting a seemingly uninterrupted power supply to the user.

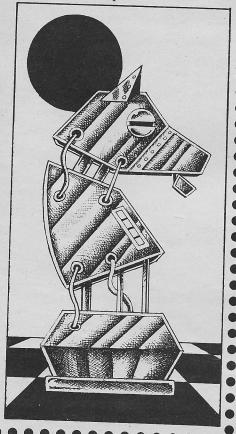


Written and drawn by Chris Smithers

### BUZZWORDS

#### Micros in check

COMPUTER CHESS championships are now held regularly, in which computers play each other as well as playing people. Last year the champion was a computer called Belle, which was capable of considering 160,000 different moves and positions every second. It had a rating of 2,400 points, and contained nearly 2,000 chips.



Buzzwords are the jargon of the computer world and can
 be very confusing. Below, Load Runner continues its
 glossary of computing terms. Get buzzing.

Daisywheel. A type of printer which produces high-quality output. It uses a removable print element in the shape of a disc with the characters attached to stalks which surround a central hub. This type of printer can be connected to almost any computer.

Data. Information which is entered, stored, manipulated, and output using a computer. Everything which is entered into a computer is treated as data. If the memory contents of a computer were to be examined it would show that all data is represented as numbers. The computer can understand only numbers so it has to translate data which is entered in English-type sentences into numeric data.

**Database.** A collection of bits of information which can be accessed quickly by a computer. Databases can contain all types of information from patients' medical records to criminal records.

**Debug.** To identify and sort out the errors which exist in a computer program. The error, or bug, could be in the structure of the program or in the data which the program is using.

**Decimal notation.** Numbers such as 40 or 3.2 which we usually use to perform calculations. These num-

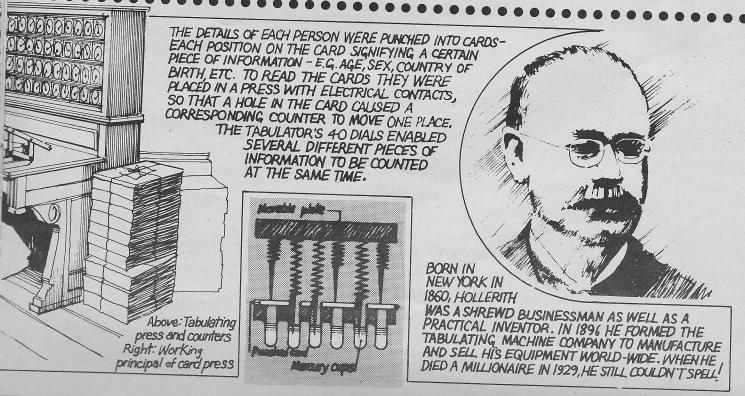
bers are in base ten, which means that we can count from one to nine in the units column of a number before we put one in the tens column.

**Digital.** A system which uses electronic pulses to represent data. The state of the signal represents a set of instructions to the computer which then carries out those instructions using its own digital electronic pulse code.

**Disc.** Used for storing data and programs when a computer is switched off. For this reason it is called a backing storage medium. A disc is inserted into a disc drive. It is that device which records the information on to the magnetic surface of the disc.

Diskette. Sometimes called a floppy disc. It is smaller than a disc and more durable. It can, for instance, be sent through the post without damage being done to it.

Dot matrix. Another type of printer. This squirts ink on to the paper in the printer. The ink is forced through a tiny grid which forms the letters on the page. The grid contains a block of holes, some of which are shut to drive the ink into a particular pattern. The printer usually has its own program to control the ink flow and distribution.







Shut down all systems! It's . . .

by Philip Steele

banks all over the world, in railway stations, in airports, in the home and in space as well, people depend on the microchip. The gamble pays handsome dividends, until the resources of planet Earth are attacked by some mysterious bacteria. Top of the menu for the bacteria banged behind the professor and his footsteps echoed are silicon chips. The world panics but Joe and Ellie do not-at least not very much. They survive all kinds of disasters and finally make their way to the observatory of the strange Professor Lebo, where they stumble across an extraordinary clue. . .

that they could look closer at the photograph. At first, white coats. Ellie noticed nothing special. The picture was of a comet, presumably the one which was passing so close to Joe, isn't it? And Ollie". the Earth at that moment.

"Give us the magnifying glass, Joe".

entered the study.

"Please, please! Take your grubby fingers off those missed." photographs. They are not holiday snapshots but important scientific data. Now, come with me"

tion.

system. The sun activates the comet's gases until they bristling with antennae and extensions. glow. Now the tail, here,"-the professor pointed beyond



one of Joe's thumbprints-"is simply that part of the main body which is forced to stream backwards as the comet continues on its orbital path"

"Yes, professor, we know all that", interrupted Joe.

"But look closer at the head of the comet".

The old boy grunted impatiently. "Oh, very well". He peered through the lens-and fell silent. After what seemed like an eternity he stood up and scratched his mane of white hair. He went to a filing cabinet and took a negative from a numbered envelope. He slid it into a Humanity has gambled on its future. In offices and special microscope carrier and with his thick glasses pushed up on his dome, bent over the eyepiece. He clicked up the magnification several times and drummed his fingers on the desk.

"Right, stay here. Don't touch a thing!" The door

along the corridor. He was running.

"It is a spaceship, isn't it, Ellie?" asked Joe.

"Looks like one to me".

"And it's not like any of our spacecraft, right?"

"Not unless it's a secret one, or something".

There was a hubbub in the corridor outside and the OE SWITCHED ON the professor's desk lamp so professor hurried back, followed by a stream of people in

"Ladies and gentlemen-my two young visitors. Er,

'Ellie''.

"Ah, yes, Ellie. Meet Dr Osman, Dr Francis, Mr Puce, "Look, here, just in front of the comet!" Joe pointed. Mrs Heino, and my colleague Professor Morris-Jones. Well, ladies and gentlemen, Joe and Ellie have spotted Just then the door swung open and Professor Lebo something unusual on D3706. Something which, in the confusion of moving our records here, we seem to have

He transferred the negative to an epidiascope, switched off the lights and drew the curtains. The "But professor, look at this", pleaded Ellie in despera- projected image of the comet filled the screen. There, in front on the comet, for all to see, was an unusual shape, a "Aha, the comet. Well, now. Comets are bodies made series of hexagons linked by a central column. The image of dust and gas, whose orbit passes through the solar was blurred but it seemed that the hexagons were

"Now, this shot was produced in our laboratories; for

### OUNTDOWN TO CHADS



the moment we may assume that there is no question of faking. We shall have a full conference of the staff in five minutes. In the meantime I shall contact the Prime Minister. Mr Puce, see if we can re-establish communication with any of our colleagues around the world. Dr Osman, set up emergency surveillance".

hey seem to have forgotten about us". Joe and Ellie were still sitting in the professor's office. The bigwigs had been in conference for half an hour or more. A man had taken Joe and Ellie biscuits and a glass of orange and they were looking at some of the books in the prof's collection making sure that this time they did not leave sticky fingerprints on the pages.

"It says here that there are worms in the sea which can bore through stone". Joe turned the page. "It's not surprising that bacteria can destroy metal and non-ling metallic elements such as silicon"

'What are bacteria?'' queried Ellie.

'Chuck over Volume 1"

"B. Bacteraemia . . . Bacteria . . . well . . . it seems that they're tiny vegetable organisms which help to break down the structure of things, like when things rot... Here, look at these pics".

Ellie took the encyclopaedia. "Wow! Hmmm. . . 'Bacterial leaching'. A method of mining which makes use of bacteria. Mineral deposits are blown up with explosives. Bacterial solutions are then pumped into the deposits. The minerals are consumed by the bacteria which are then flushed back to the surface. . .'

"So—people already use bacteria to gobble up minerals?"

"Sounds like it".

"Well. . . suppose that's what's happening now? Suppose somebody's extracting all the silicon from the Earth—and minerals too, perhaps?"

"Don't be daft, Joe. How could they send bacteria all over the world at once. And pump it back somewhere without us all noticing . . . and pump it back-where?"

"Well..." Joe wandered over to the window and pulled back the curtains to look over the rolling grounds

of the observatory. "Well. . .space? Perhaps the silicon is being beamed up to some kind of goods train out in space. I know it sounds stupid, but. . .

"But there is a spaceship out there". Ellie's voice was shaking. "And the comet might be a great cloud of mineral dust and silicon which has been gathered by the spaceship to take it back to its own planet!"

"A kind of interplanetary mining expedition."

There was a moment's silence while Joe and Ellie stared at each other, agog with excitement.

"Quick, let's go and find Lebo".

Joe and Ellie raced out of the room. The doors of the conference room were at the end of the corridor. The two cannoned into each other as they collided with the double doors and went head over heels into the room. Thirty faces swung round and the professor rose to his feet.

'Very well, what is it? I hope you haven't interrupted

us for nothing." Lebo looked fiercely at Joe. Joe gulped. "Well, it's just an idea . . .

he curfew had long been in force by the time Professor Lebo's old Bentley sped up to 33 Maldwyn Road. Joe and Ellie's bikes were strapped to the back and the two youngsters were dozing in the back seat. The prof's special pass had allowed them to sweep through all the road blocks on the way home from the observatory. It seemed that the threatened flood had come to nothing. Dad came storming out of the house.

"What have they been up to? I warned 'em! Oh, back

again, are you?"-to the professor.

"I'm sorry if you have been worried," sighed the professor, "but I'm sure you will understand. You see these two rascals have today achieved more than some of the best brains in the country".

'It's a spaceship, dad!" Joe gabbled.

"And it's nicking all our resources, you see", said Ellie.

'No, I don't see", said dad. "You'd better all come in". "What it means", said Ellie, as dad passed a cup of tea

to Professor Lebo across the kitchen table, "is that mum was probably right"

Mum smiled. "Well, of course!"

"Oh, we can't be certain", said the professor, chuck-

"At the moment there is every indication that the children's theory is correct. The comet has now passed away from our planet and we can establish no contact with the alien spacecraft but it seems that with its passing the minerals still left have been stabilised and no more computer systems have failed. The crisis is over. We shall have to re-build and re-think—we have learned a useful lesson".

"Suppose they come again?" Joe piped up.

"Well, then we are ready for them". The professor gestured towards the stars already shining through the

There is life out there. We shall learn to communicate and, I hope, co-operate. Joe and Ellie, thank you. I think you will find that you are famous tomorrow, but don't let the fame go to your heads, you two. We're going to need some sensible people around in the future!

"Well, that rules out Joe!" said Ellie. "What a shame!"

"At least I'm not an alien from outer space already", countered Ice.

'Oh, shut up and go to bed, will you?'' screamed mum. "Nothing really changes", muttered Ellie, "night".

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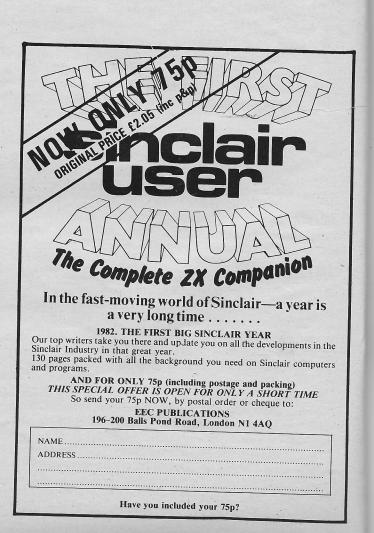
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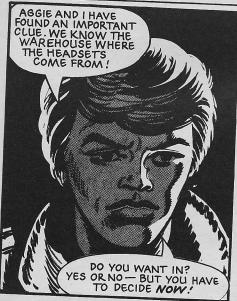
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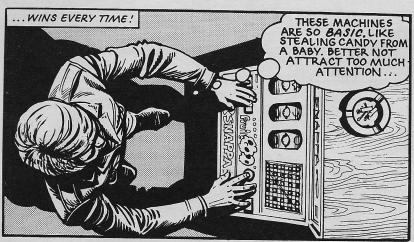










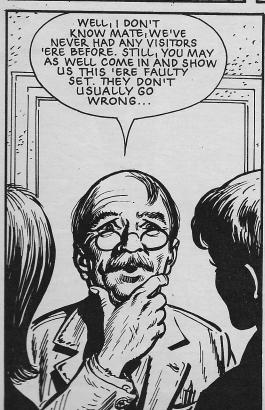












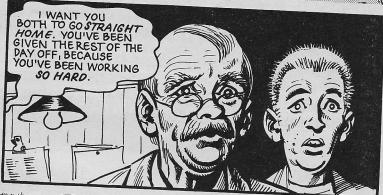




### THE ARCADIANS





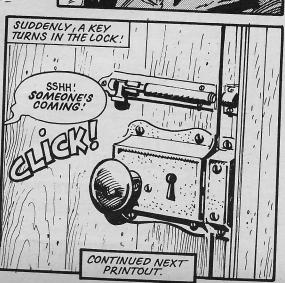












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### Gommodore 64



#### Specifications

Price Number sold

How sold Processor

Standard RAM Expansion RAM

Basic + operating system

Display

Tape recorder

**Backing storage** 

Z-80 option

Colour

Optional

£299.99 110,000 Assembled 6510/6502 64K

Disc drives

16K

24 lines × 40 characters Manufacturer's

#### Software

Anirog Software, 26 Balcombe Gardens, Horley, Surrey. Level 9 Computing, 229 Hughenden Road, High Wycombe, Bucks, HP13 5PG. Llamasoft Software, 49 Mount Pleasant, Tadley, Hampshire, RG26 6BN.

#### Comments

A relative newcomer to the computer market in Britain. This computer is expected to do well during the run-up to Christmas and is already on many dealers' Top Ten lists. Most Vic-20 peripherals are compatible with the Commodore 64 although Vic programs will have to be modified slightly, in some cases, to run on it. Next year a Z-80 processor cartridge will be introduced to allow CP/M business software to be run on it.

#### **Program**

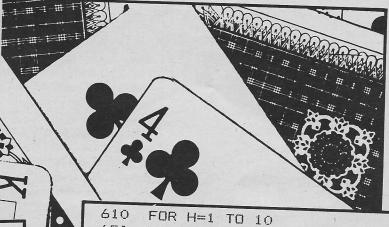
This program is an aid in the design of sprites on the 64. You must put in the decimal byte value when asked by Column and Byte. The computer will then display your creation on the screen.

10 DIM A(21,3)
20 PRINT "CLR"
30 FOR K=1 TO 21
40 FOR M=1 TO 3
50 PRINT "ROW";K;"BYTE";M
60 INPUT A(K,M)
70 NEXT M
90 NEXT K
90 LET D=53248
100 POKE D+21,2: POKE 2041,13
110 LET N=0
120 FOR K=1 TO 21
130 FOR K=1 TO 3
140 POKE 832+N,A(K,M)
140 POKE 832+N,A(K,M)
150 PRINT "CLR"
150 POKE D+4,10: POKE D+5,10

#### Hi-Low

HE COMPUTER will pick a card at random and you must decide whether the next card will be higher, lower, or the same. This version of the old classic can be easily expanded using high resolution graphics. The program runs on the Oric and uses 9.5k of memory.

Hi-Low was submitted by A. T. Dhalla of London, N1.



- CLS PLOT10,10,"NICE TO SEE YOU" 5 PLOTIO, 12, "TO SEE YOU NICE" 6
- WAIT 200 7 FORA=1TO4 10
- READB 11
- FORC=1TO8 12
- READD 13
- POKEB, D 14
- B=B+115 NEXTC 16
- 17 NEXTA
- LETA\$(1)="{" 20
- LETA\$ (2) ="}" 21
- LETA\$ (3) ="1" 22 LETA\$ (4) =" [" 23
- GOSUB1040 24
- 25 CLS
- X=1NT(RND(1)\*13)+1100
- Z=X101
- G0SUB2000 102
- GOSUB1000 105
- FORS=1TO4 106
- PRINT"WILL THE NEXT CARD BE 200 HIGHER LOWER OR SAME (H,L,OR S)
- INPUTA\$ 210
- IFA\$="H" THEN 300 220
- IFA\$="L" THEN 300 230
- IFA\$="S" THEN 300 240
- PRINT"IT MUST BE H,L OR S" 250
- GOT0210 260 GDSUB1040 300
- Y = INT (RND(1) \*13) +1301
- Z=Y302
- GOSUB2000 303
- IF X<Y AND A\$="H" THEN 441 400
- IF X<Y AND A\$="L" THEN 441 410
- IF X<Y AND A\$="\$" THEN 441 420
- G0SUB1000 421
- PRINT "WRONG" 430
- WAIT100 431
- 432 CLS
- G0T0700 440
- GOSUB1000 441
- PRINT "RIGHT" 500
- X=Y 510
- 600 NEXT S
- 605 CLS

- PLOT 15,12, "WELL DONE" 620
- 630 WAIT 30
- 660 PLOT 15,12," "
- WAIT 30 665
- 670 NEXT H
- 680 GOTO 720
- PLOT 10,12, "THAT'S TOO BAD" 700
- 710 WAIT 500
- PLOT 1,12, "DO YOU WANT TO 720 PLAY THE GAME AGAIN Y/N."
- 730 INPUT IS
- 740 IF I\$="Y" THEN 24
- 750 END
- 1000 FOR W=1TOZ
- 1010 PRINT A\$ (R);
- 1020 NEXT W
- 1021 PRINT
- 1030 RETURN
- 1040 R-INT(RND(1) \* 4) + 1
- 1050 ON R GOSUB 1070,1090,1110, 1130
- 1060 RETURN
- 1070 LET F\$ = "OF DIAMONDS"
- 1080 RETURN
- 1090 LET P\$ = "OF SPADES"
- 1100 RETURN
- 1110 LET P\$ = "OF CLUBS"
- 1120 RETURN
- 1130 LETP\$ = "OF HEARTS"
- 1140 RETURN
- 2000 IF Z = 11 THEN PRINT "JACK"
- P\$
- 2010 IF Z = 12 THEN PRINT "QUEEN"
- P\$ 2030 IF Z = 13 THEN PRINT "KING"
- 2040 IF Z = 1 THEN PRINT "ACE" P\$ 2045 IF Z<=10 AND Z>1 THEN PRINT
  - Z " " P\$
- 2050 RETURN
- 10000 DATA 47080
- 10001 DATA 4,14,31,31,31,14,31,0
- 10002 DATA 47064
- 10003 DATA 0,12,30,63,63,30,12,0
- 10004 DATA 46824
- 10005 DATA 12,30,45,63,45,12,30,0
- 10006 DATA 46808
- 10007 DATA 0,10,31,31,31,14,4,0



HI! I'M BRAINY and I really rate computers. I'm in Load Runner every issue so write to me at 196-200 Balls Pond Road, London N1 4AQ and I'll do my best to answer any questions you have.

Remember, Brainy's the name and, by the way, I will pay £1 to anyone whose name is mentioned. Write away!

### BRIND'S BRINDOX

#### An ABC for the BBC

YOU HAVE suggested books to help people with their computers. I have a BBC. What do you suggest to help me?

Brian Vaughn, Aldershot

THE ONLY SIMPLE book on using the BBC micro which young people can follow is *Easy programming for the BBC* published by Shiva. Many grown-ups use it, too. You may also be interested in *TY graphics* from Margetts Computing, a set of exercise programs with two cassettes of commentary. That is very good if you know the basic ideas.

### **Equal** opportunities?

I THINK it is unfair that computers are taught much better at boys' schools than girls' schools. None of the teachers at my school know anything about computers but at the boys' school next door they have regular lessons in computing and a much bigger range of computers than us. Is there anything I can do?

Fiona Forsyth, Birmingham

I AM AFRAID that is common throughout single-sex schools around the country; it is of course partly due to the fact that girls have been, on the whole, less interested in computing than boys. Only 14 per cent of girls interested in computers have one at home. The situation is improving slowly. I am sure that you will soon have a teacher who knows about computers and in the meantime you can keep yourself informed by reading *Load Runner*, going to local shows and courses, and watching computer programmes on TV, or joining a club.

### The low down on sprites

I HAVE READ in computer magazines about Commodore and Atari computers having sprite graphics. Please could you tell me what is special about them?

Kevin Banks, Cornwall

SPRITE GRAPHICS are a way of having layers of graphics, like foreground and background. They are capable of printing, say, a man walking down a street, and printing him in front of a shop, so that it looks as if he is walking in front of it, and could tell the programer when he is in front of the shop. It can be done on computers without sprite graphics but it uses more memory and is much more complex. That is one of the reasons why the Atari machines are such popular games computers, because it is also easy to tell whether a bullet has hit someone or not.

### Two weeks is too long

I THINK that Load Runner is great but why doesn't it appear every week? Two weeks is a long time to wait to see what happens in the stories.

Simon Carter, Hull

TWO WEEKS might seem a long time to you but it is very short for all the work which needs to be done in the preparation and publishing of each issue. Perhaps, if the comic continues to be successful, it will be produced weekly, but even Brainy me can't see so far ahead.

A micro for all the family

I LIVE in a large family and we want to buy a computer, but we want one which more than one person can play with and which is not too costly. Please can you suggest a computer which fits that description?

Alyson Francis, Cheltenham

MOST COMPUTERS have games which can be played by more than one person, for instance the Spectrum, which is fairly inexpensive and has a number of games—e.g., Monopoly and Scrabble—for more than one person. I suggest that you buy whatever computer you want, checking first that someone produces games with a two-person control.

### All the colours of the rainbow

ARE THERE any home computers which have a complete range of blendable colours so you can have a rainbow effect on the TV screen?

Simon Randall, Yorkshire

THE ATARI 400 and 800 are capable of producing that effect but it requires complex commands. Once that has been mastered, you can get a very stunning effect. Unfortunately it is not capable of giving the full colour range of the rainbow, because it would be too complex. It has some 150 colours available. You can buy add-ons and special software for computers like the BBC and Commodore which enable them to have a good range of colours.

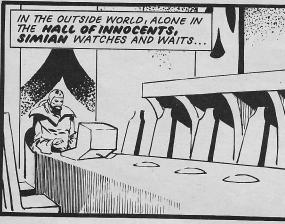
## TRUMBULES WORLD

AS THE CHILDREN OF PROGRAMMER TRUMBULL SEARCH FOR THE EQUATION THAT WILL LIBERATE MANKIND IN THE ADVENTURE WORLD THEIR FATHER CREATED ON HIS COMPUTER, SMILAN, HEAD OF THE GOVERNMENT, WAITS FOR HIS OPPORTUNITY TO HUNT THEM DOWN...



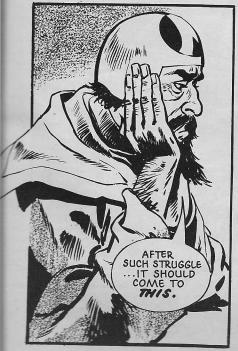










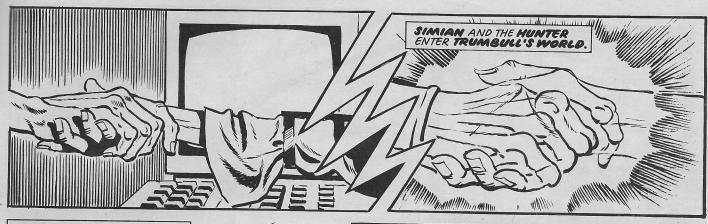








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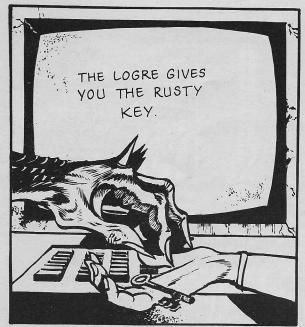








#### TRUMBULL'S WORLD

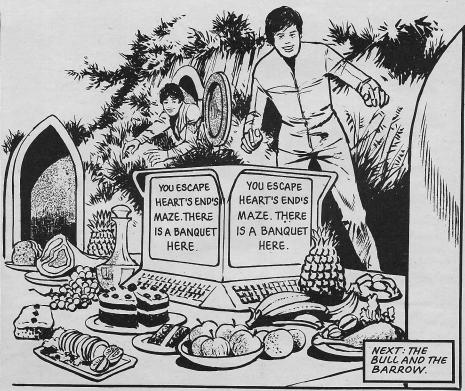


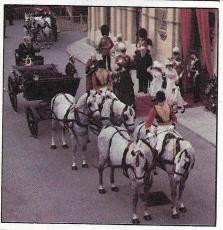






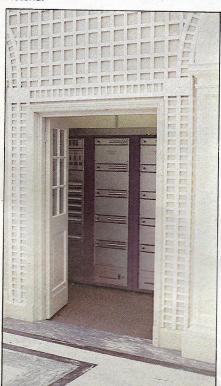






Top: the Royal locomotive, 'The Queen.' Above: the royal party leaving for Windsor Castle.

Below: a section of the computer. Below right: the animated figure of Queen Victoria.



# Royalty & robots

T WINDSOR & ETON Central Station Madame Tussaud's has opened its most ambitious project to date—the Royalty and Railways exhibition that commemorates Queen Victoria's Diamond Jubilee of 1897. The exhibition depicts the arrival by Royal Train at Windsor of the Royal Family and recreates the scene in lifelike and lifesize detail, from the station porters to the entire Guard of Honour; an impressive display which has at its centre the gleaming replica of the royal locomotive, 'The Queen'.

The exhibition also includes an audio-visual presentation celebrating 'Sixty Glorious Years' of Victoria's reign, and it is here that, almost unpublicised, Madame Tussaud's has unveiled its most stunning accomplishment. Presented and narrated by actor Frank Finlay, the short theatrical performance introduces important historical figures from Victorian England-Florence Nightingale, Disraeli, Charles Dickens, and of course, Victoria and Albert. Blinking in the dazzle of the spotlights, they deliver their lines with clarity and aplomb, and go through their movements with precision. An astounding sight, because all the actors, including Finlay, are computercontrolled automata-speaking, moving robots that are the climax of five years of research and programming, and the first such

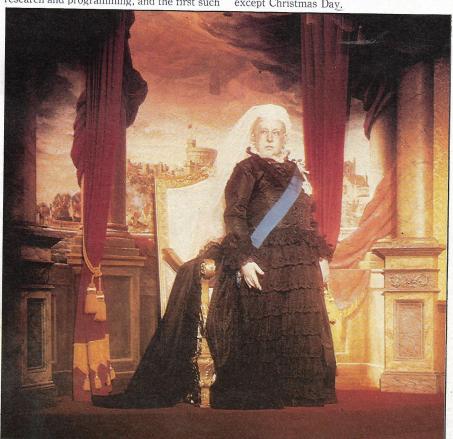
figures seen outside Disney's Theme Parks.

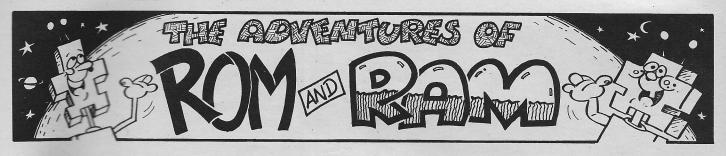
Madame Tussaud's is understandably proud of its achievement. Consultant John Wardley proudly asserts that the animation has equalled the standard previously set by Disney. The heads are particularly realistic, even down to the barely perceptible movement of bone and muscle beneath the skin. Wardley is not one to rest on his laurels, however: 'These are only prototypes; in two or three years we'll have something that will really make people sit up and take notice.'

#### Secret system

The complex and vast array of computer equipment that operates the automata—and, in fact, the entire theatre, from the opening of the doors to the lights going on at the end—remains a closely-guarded secret. Load Runner was allowed only a quick peek at a huge bank of decoders before they were once more locked away.

Royalty and Railways, is, in anyone's book, an exhibition well worth a visit. For the computer enthusiast it is a must, providing as it does an opportunity to marvel at state-of-the-art computer capability, and a glimpse of the shape of things to come. The exhibition is open every day from 9.30 am to 5.30 pm, except Christmas Day.



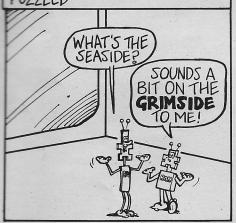


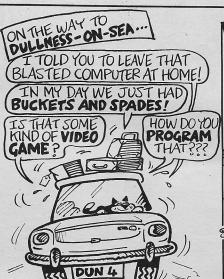






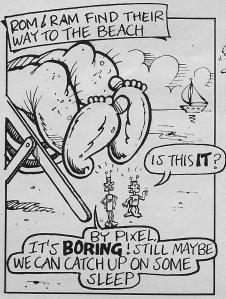






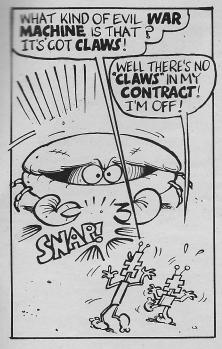








#### ROM & RAM









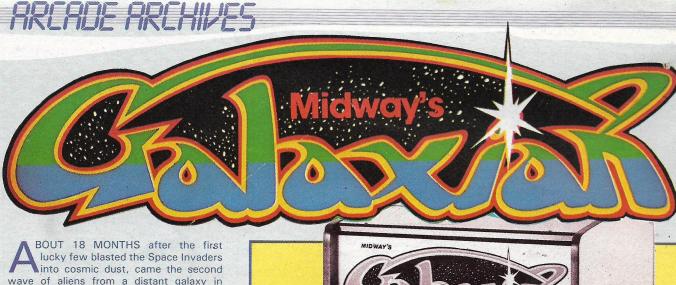












BOUT 18 MONTHS after the first lucky few blasted the Space Invaders into cosmic dust, came the second wave of aliens from a distant galaxy in Galaxian. This was brought into this country by Bally Midway, now Bally International. As with the Invaders, only a few units were imported at first but they were, of course, a great success and were soon followed by thousands more machines.

Graphically, Galaxian is a great improvement on Space Invaders by featuring multi-coloured aliens hovering unsteadily at the top of the screen, frequently breaking formation and screaming downwards intent on destruction by dropping not one, but great clusters, of bombs. The player has to be more skilful in his use of the laser base ship to avoid the bombs and destroy or avoid the swooping creatures, whose numbers increase on each new wave. If an alien is lucky enough to avoid destruction by the player, it will re-appear at the top of the screen to fall back into formation.

To achieve high scores, the player must try to hit the yellow coloured commander in flight, but an even greater bonus can be earned by destroying the red escorting aliens just before the commander. Woe betide the player who gets cornered by the swooping aliens. An extra life can be earned on reaching 5000 points but this varies on different machines.

### Software

TARI Galaxian for the 400/800 home computer is a very good transformation from the arcade original and Atari will soon launch Galaxian for their Video Computer System under licence from Bally.

Commodore produce Vic Galaxian for the Vic 20 and Interceptor Micros also produce a version called Galaxzion. Both run on the unexpanded Vic 20.

BBC Model B owners may like to invest in Swoop by Program Power of Leeds.

In ZX-81 Galaxian manufactured by Artic Computers aliens inhabit the circuits of 16K 81's waiting to destroy the unsuspecting player.

All the above programs have several skill levels to tax all from the beginner to the pro.

 Star Ratings out of 10

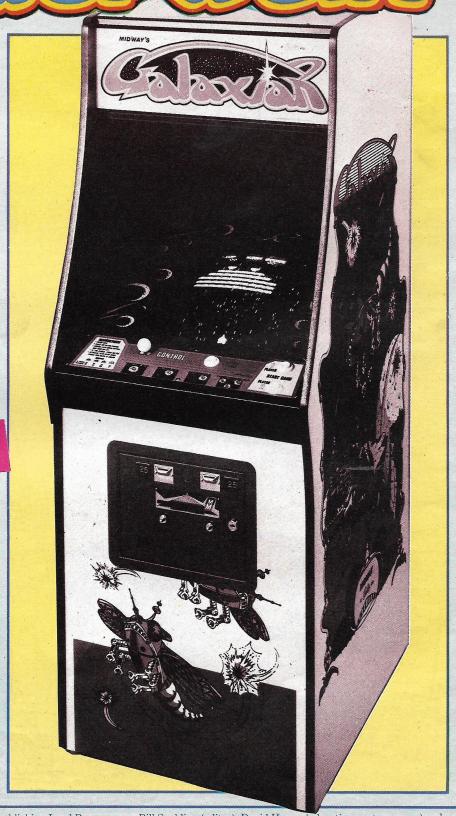
 Atari
 8

 Vic Galaxian
 6

 Interceptor Micros
 7

 Swoop
 7

 ZX Galaxian
 6



Providing processor power to The Controller in publishing Load Runner were Bill Scolding (editor), David Hogan (advertisement manager) and June Mortimer (administration). Chris Winch, Harold Mayes MBE, Terry Cartwright and Richard Hease linked into the system. The corporate might of ECC Publications of 196–200 Balls Pond Road, London N1 4AQ was utilised continually. Printout by Cradley Print PLC, Warley, West Midlands. Distributed by Spotlight Magazine Distribution Limited, 01–607 6411. ISSN 0264-8369. © 1983 Load Runner.